Amendments to the Claims

1.   (currently amended) A method for supplying a unified suite of quantification functionality for density functions defined in a three-dimensional space including two or more of the services selected from the group consisting of:

(a)   Computing of the volume of a region where a density lies above a specified threshold, below a specified threshold, or between two specified values;

(b)   Computing an integral of a density; [,]

(c)   Computationally estimating of a rate of change of a density with respect to time;

(d)   Computationally estimating of a local or global failure of conservation of a superstrate within the region represented by changes with time in density;

(e)   Computationally estimating of a local or global rate at which material with a changing density is passing through a specified surface within the region or at a boundary of the region; and

(f)   Separating of density of a material into free and bound densities with a changing density;

wherein an image is provided from the unified suite.

2.   (original) The method of claim 1 wherein the density function in at least one service varies in time.

3.   (original) The method of claim 1 wherein the density function in at least one service does not vary in time.

4.   (original) The method of claim 1 wherein (c) is restricted to a specified region.

5.   (original) The method of claim 1 wherein estimation of local or global failure of conservation is performed with an implemented transport model.

6. (original) The method of claim 1 wherein estimation of the global rate or local rate at which a superstrate with a changing density is passing through a specific surface is performed with an implemented transport model.

7. (original) The method of claim 1 wherein at least two services used in the method each yields an answer for restriction of a density to a specified region.

8. (original) The method of claim 1 where a density is obtained by a three-dimensional scanning process.

9. (original) The method of claim 1 wherein a density is obtained by a numerical simulation process.

10. (original) The method of claim 1 wherein a density is obtained by an algorithm specification.

11. (previously presented) The method of claim 1 wherein the volume in (a) is computationally estimated by counting grid points.

12. (previously presented) The method of claim 1 wherein the volume in (a) is computationally estimated by approximation within eight-cornered volume elements.

13. (original) The method in claim 12 wherein the approximation within said eight-cornered volume elements is performed by fitting a boundary surface to interpolated edge points of said volume elements.

14. (previously presented) The method of claim 1 wherein the volume in (a) is computationally estimated by finding the volume contained in a triangulated surface approximating the boundary of said region.

15.   (original) The method in claim 14 where the volume contained in said surface is computed by summing signed volumes of prismatic domains obtained by projecting triangles parallel to a coordinate axis.

16.   (previously presented) The method of claim 1wherein the integral in (b) is computationally estimated by summing density values at grid points.

17.   (original) The method of claim 16 wherein a grid point near an edge of a region of restriction contributes a value weighted by a fraction of an immediate neighborhood of a grid point that is in the said region.

18.   (previously presented) The method of claim 16 wherein the integral in (b) is computationally estimated by fitting local approximations to the density and summing integrals of these approximations.

19.   (original) The method of claim 18 wherein a local approximation near the edge of a region of restriction contributes its integral over part of its domain that is in said region.

20.   (original) The method of claim 1 wherein said density comprises a concentration of a drug or other molecular substance in an organism.

21.   (original) The method of claim 1 wherein said density refers to the concentration of a class of cell in an organism.

22.   (original) The method of claim 1 wherein said density refers to the concentration of microscopic devices inserted into an organism.

23.   (original) The method of claim 20 wherein said organism is a human body.

24.   (original) The method of claim 21 wherein said organism is a human body.

25.   (original) The method of claim 22 wherein said organism is a human body.

26.   (original) The method of claim 20 wherein said region is within a human brain.

27.   (original) The method of claim 21 wherein said region is within a human brain.

28.   (original) The method of claim 22 wherein said region is within a human brain.

29.   (original) The method of claim 1 wherein the density represents molecules, cells or devices inserted into an organism, body or brain for therapeutic purposes.

30.   (original) The method of claim 29 wherein said density is obtained by simulation of the transport and action of said molecules, cells or devices.

31.   (original) The method of claim 20 wherein said density within the body, and said molecules or cells are part of a normal process or disease process.

32.   (original) The method of claim 1 wherein said density refers to a material being transported by a geological process.

33.   (original) The method of claim 1 wherein said density refers to a material moving through a structure created by human agency.

34.   (original) The method of claim 1 wherein said density is a mathematical construct convenient in defining three-dimensional shapes for the purposes of computer-aided design.

35.   (previously presented) A method for effecting a therapy upon a patient comprising volumetrically evaluating a volume of a body of the patient by assuming available locations or a specific location for introduction of a therapy, estimating a dynamic response of administration of a material at the specific point or at the various points to determine the dynamic response on the basis of the volumetric evaluation, and selecting a therapy on the basis of results of the estimating.

36.   (original) The method of claim 35 wherein the selected therapy is then approved for use on a patient.

37.   (original) The method of claim 36 wherein the selected therapy is performed on the patient.

38.   (currently amended) A method for supplying a unified suite of quantification functionality for density functions defined in a three dimensional space and dynamically in time for that three-dimensional space including two or more of the services selected from the group consisting of:

(a)   Computing of the volume of a region where a density lies above a specified threshold, below a specified threshold, or between two specified values;

(b)   Computing of an integral of a density; [-]

(g)   Computationally estimating of a rate of change of a density with respect to time;

(h)   Computationally estimating of a local or global failure of conservation of a superstrate within the region represented by changes with time in density;

(i)   Computationally estimating of a local or global rate at which material with a changing density is passing through a specified surface within the region or at a boundary of the region; and

(j)   Separating of density of a material into free and bound densities with a changing density;

        wherein an image is provided from the unified suite.